

What is claimed is:

1. A method comprising:

establishing a secured direct link between a first station and a second station of a wireless local area network by exchanging two or more protocol messages between an access point and the first station and the access point and the second station.

2. The method of claim 1, comprising:

receiving from the first station a request to establish the secured direct link, wherein the request includes communication rate information and encryption method information.

3. The method of claim 1, comprising:

receiving from the second station a request to establish the secured direct link, wherein the request includes communication rate information and encryption method information.

4. The method of claim 2, wherein establishing comprises:

sending to the second station a message to establish the secured direct link, wherein the message includes communication rate information of the first station and encryption method information of the first station.

5. The method of claim 3, wherein establishing comprises:

sending to the first station a message to establish the secured direct link, wherein the message includes communication rate information of the second station and encryption method information of the second station.

6. The method of claim 1 comprising:

selecting a supported communication rate from a set of communication rates.

7. The method of claim 6, wherein selecting comprises:  
selecting the supported communication rate from a subset of said set of communication rates, wherein the rates in said subset are supported, at least in part, by both the first station and the second station.
8. The method of claim 1, comprising:  
selecting an encryption method supported by both the first station and the second station; and  
generating pair-wise keys according to the selected encryption method.
9. The method of claim 8, wherein generating comprises:  
generating unicast pair-wise keys for encrypting a data packet; and  
generating unicast pair-wise keys for decrypting the data packet.
10. The method of claim 8, wherein selecting the encryption method comprises:  
selecting the encryption method from a group of robust security network encryption methods.

11. An apparatus comprising:

a controller to establish a secured direct link between a first station and a second station of wireless local area network by exchanging two or more protocol messages with the first station and the second station.

12. The apparatus of claim 11, wherein the controller is able to receive from the first station a request to establish the secured direct link, the request including a first set of communication rates and at least a type of a supported encryption method, and wherein the controller is further able to generate a response message that includes at least a second set of communication rates and the type of the supported encryption method based on information received from the second station.

13. The apparatus of claim 12, wherein the controller is able to select from the first set of communication rates and the second set of communication rates a subset of communication rates that are supported by the first station and by the second station.

14. The apparatus of claim 12 wherein the controller is able to select an encryption method that is supported by the first station and the second station based on the supported type of the encryption method.

15. The apparatus of claim 14 comprising a key generator to generate pair-wise keys according to the encryption method.

16. The apparatus of claim 15, wherein the controller is able to generate two or more response messages that include a subset of communication rates and the pair-wise keys.

17. The apparatus of claim 17, comprising a transmitter to transmit the response messages to the first station and to the second station.

18. An apparatus comprising:
  - a dipole antenna to receive and transmit two or more protocol messages; and
  - a controller to establish a secured direct link between a first station and a second station of wireless local area network by exchanging the two or more protocol messages with the first station and the second station.
19. The apparatus of claim 17, wherein the controller is able to receive a from the first station a request to establish the secured direct link, the request including a first set of communication rates and at least a type of at a supported encryption method, and wherein the controller is further able to generate a response message that includes at least a second set of communication rates and the type of the supported encryption method based on information received from the second station.
20. The apparatus of claim 17, wherein the controller is able to select from the first set of communication rates and the second set of communication rates a subset of communication rate that are supported by the first station and by the second station.
21. The apparatus of claim 17, wherein the controller is able to select an encryption method that is supported by the first station and the second station based on the supported type of the encryption method.
22. The apparatus of claim 18 comprising a key generator to generate pair-wise keys according to the selected encryption method.
23. The apparatus of claim 21, wherein the controller is able to generate two or more response messages that include a subset of communication rates and the pair-wise keys.

24. The apparatus of claim 22, comprising a transmitter to transmit the response messages to the first station and to the second station.

25. A wireless communication system comprising:  
an access point that includes a controller to establish a secured direct link between a first station and a second station of wireless local area network by exchanging two or more protocol messages with the first station and the second station.
26. The wireless communication system of claim 24, wherein the controller is able to receive from the first station a request to establish the secured direct link, the request including a first set of communication rates and at least a type of at a supported encryption method, and wherein the controller is further able to generate a response message that includes at least a second set of communication rates and the type of the supported encryption method based on information received from the second station.
27. The wireless communication system of claim 24, wherein the controller is able to select from the first set of communication rates and the second set of communication rates a subset of communication rates that are supported by the first station and by the second station.
28. The wireless communication system of claim 24, wherein the controller is able to select an encryption method that is supported by the first station and the second station based on the supported type of the encryption method.
29. The wireless communication system of claim 25 comprising a key generator to generate pair-wise keys according to the selected encryption method.
30. The wireless communication system of claim 28, wherein the controller is able to generate two or more response messages that include a subset of communication rates and the pair-wise keys.

31. The wireless communication system of claim 29, comprising a transmitter to transmit the response messages to the first station and to the second station.

32. An article comprising: a storage medium, having stored thereon instructions, that when executed, result in:

establishing a secured direct link between a first station and a second station of a wireless local area network by exchanging two or more protocol messages between an access point and the first station and the access point and the second station.

33. The article of claim 31 wherein the instruction of establishing when executed, result in:

receiving from the first station a request to establish the secured direct link, wherein the request includes communication rate information and encryption method information.

34. The article of claim 32, wherein the instruction of establishing when executed, result in:

receiving from the second station a request to establish the secured direct link, wherein the request includes communication rate information and encryption method information.

35. The article of claim 31 wherein the instruction when executed, result in:

sending to the second station a message to establish the secured direct link, wherein the message includes communication rate information of the first station and encryption method information of the first station.

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